

congenital type was worthy of considerable attention, in view of the fact that the patient had suffered from paroxysmal migraine and constipation for many years. Possibly, the muscle state here was of toxic origin, which also had some bearing on typical Thomsen's disease, as had been demonstrated by Goldflam and others for family periodic paralysis.

Dr. Terriberry said he had reported two cases of myotonia occurring in the same family, both girls. In neither of them was there noticeable hypertrophy of the muscles. He was inclined to think that hypertrophy in these cases was a less marked feature in females than in males.

ANTERIOR POLIOMYELITIS WITH INCREASED KNEE JERK.

By Dr. Atwood.

The patient was a girl, three years old, who had enjoyed good health and had been able to walk at the age of two years. Last June, *i. e.*, six months ago, she had an attack of fever lasting two days, following which she has limped slightly in the right leg. The muscles permanently affected are the posterior tibial. In these there is reaction of degeneration. The knee jerk of the affected limb is greater than that of the left, and the case is interesting on this account.

A CASE OF ACUTE POLIOMYELITIS IN AN ADULT.

By Dr. Atwood.

The patient was a man, thirty-three years old; a college student. His family and previous history were negative.

In August, 1906, nearly five months ago, he had a fever of several days' duration, accompanied by certain subjective symptoms, and the gradual onset of paralysis in his right arm, beginning in the shoulder and upper arm and culminating in the hand and finger muscles after thirty hours. An examination showed that sensation to heat and cold, pin prick and cotton were preserved. There was marked wasting of the right upper arm, shoulder and extensor surface of the forearm; also slight wasting of the right anterior tibial. The hand and affected portions of the arm were cooler than the left arm to the touch. The position of the hand was peculiar, on account of the extensor paresis. The muscles affected were the pectoralis major (upper portion), the supra and infra-spinatus, the deltoid and coraco-brachialis, the biceps, triceps, the extensors of the wrist and the long extensors of the fingers. There was also weakness of the pronators and supinators, and of the abductor pollicis.

This case, Dr. Atwood said, was thought to be of some interest on account of the comparative rarity of acute anterior poliomyelitis in the adult, and of the clearness of the subjective symptoms. In connection with the treatment of this case, the speaker inquired regarding the advisability of nerve transplantation.

Dr. Leszynsky, in discussing Dr. Atwood's first case of poliomyelitis, with increased knee jerks, said he had seen a number of cases in children where in the early stage of the disease the knee jerk was entirely absent on the affected side, but gradually returned and remained active, while the peroneal group of muscles was paralyzed and remained so.

Dr. Clark said it had occurred to him that we had a very simple explanation for the exaggeration of the knee jerks in certain types of poliomyelitis; *i. e.*, those affecting the lower posterior group of muscles

of the leg. As was well known, these muscles were represented in groups of anterior horn cells at the side of the anterior horn, and, as was also well known, the central branch of the anterior spinal artery supplied more than the gray substance of the cord; in fact, it supplied nearly all of the lateral limiting layer that was situated between the gray substance and the lateral pyramidal tract. Injury to the fibers of the lateral limiting layer destroyed the controlling connection between the first and second segments of the motor system, and then, as in hemiplegia, we might expect to find an unrestrained reflex center in the anterior horn, giving rise to an exaggerated reflex. That the injury outside the gray matter was confined to the lateral limiting layer was evidenced in that the exaggerated reflex in these cases did not bring the Babinski sign with it, or other definite symptoms of serious injury to the pyramidal tract.

Dr. Clark believed that a sharp distinction should be drawn between the ordinary cases of poliomyelitis, in which the reflexes returned in the repair process, as cited by Dr. Leszynsky, and the type Dr. Atwood showed. The latter had been very carefully studied from their *very inception*, and had presented the unique reflex exaggeration from the first stroke of the disease.

Dr. Terriberry, in reply to Dr. Atwood's query as to the advisability of nerve transplantation in these cases, said that although some excellent results had been obtained in nerve grafting, he believed that in suitable cases much more prompt and efficient repair to loss of muscle balance could be obtained by muscle transplanting; he instanced a case of substitution of the sartorius for a useless quadriceps extensor which he had seen recently, with a most happy result, and this was but one of many very excellent results of attempts at muscle balancing that he had seen at the Hospital for Ruptured and Crippled Children in this city.

The following officers were elected for the ensuing year: President, Dr. Charles L. Dana; First Vice-President, Dr. B. Sachs; Second Vice-President, Dr. L. Pierce Clark; Corresponding Secretary, Dr. Hallock; Recording Secretary, Dr. E. G. Zabriskie; Treasurer, Dr. Graeme M. Hammond.